

Remarks

In view of the above amendments and following remarks, reconsideration of the rejections contained the Office Action of January 24, 2005 is respectfully requested.

Election of Group I corresponding to claims 1-5, a polishing apparatus, is confirmed. Amended claims 1-3 and 5 as set forth above are still drawn to this elected group. Further, new independent claims 16 and 17 presented above are also drawn to this elected group.

In the Office Action, the Examiner initially rejected claim 4 as being indefinite. This rejection by the Examiner is respectfully traversed as being incorrect.

The Examiner objects to the language of claim 4 in reciting that the "device has radial length larger than a radius of the workpiece." The Examiner alleges that the scope is unascertainable. This is respectfully submitted to be incorrect.

The Examiner's first concern is that the device is recited to include a light source, a spectroscope and a charge couple device, rendering it unclear as to what a radial length may comprise. However, each of new independent claims 1, 16 and 17 define the sum of radial lengths of the light source and the spectroscope as being larger than a radius of the workpiece. Accordingly, this concern by the Examiner has been addressed by the above claim amendments.

Secondly, the Examiner was concerned that the size of a workpiece is not defined, so that the limitation becomes relative without any range or limit set by the claim or the specification as originally filed. This is respectfully submitted to be incorrect in the art to which this application is directed. In polishing apparatuses, those of ordinary skill in this art readily recognize that a top ring is made to conform to a particular size of workpiece. Thus, by defining that there is a top ring for holding and rotating a workpiece, those of ordinary skill in the art readily recognize that the workpiece that is intended to be polished by the polishing apparatus is one which has a diameter of a size conforming to the top ring.

For example, the specification describes a top ring 30 having an elastic pad 34 and guide ring 36. Those of ordinary skill in the art readily recognize that a workpiece will have a diameter of substantially the same diameter as the elastic pad, but perhaps slightly smaller, so as to conform to the inner diameter or be slightly smaller than the inner diameter of the guide ring 36. This is clearly understood by those of ordinary skill in the art.

Accordingly, by one of ordinary skill in the art looking at a claim which represents a top ring for holding and rotating a workpiece, one of ordinary skill in the art understands that the size of the workpiece intended to be employed corresponds to that of the top ring. Thus it is not a relative matter of unascertainable scope. Once a top ring has been chosen, so has the workpiece

diameter, and one of ordinary skill in the art, in looking at the components of the polishing apparatus defined in the claim, readily understands the scope.

Accordingly, it is respectfully submitted that claim 1 as amended, and new claims 16 and 17, clearly present definite claim language to one of ordinary skill in the art. Indication of such is respectfully requested.

Claims 1-5 are rejected by the Examiner as being unpatentable over Yamane et al., U.S. Patent 6,511,363 (Yamane) in view of Wiswesser et al., U.S. Patent 6,716,085 (Wiswesser). However, it is respectfully submitted that the present invention clearly patentably distinguishes over both Yamane and Wiswesser.

Yamane discloses a polishing end point detecting device 12 that uses light intensity to measure a film thickness of a wafer W. However, the polishing end point detecting device 12 of Yamane emits light to only a limited area of the wafer W. The film thickness is only measured at a small area of the wafer W.

Wiswesser also discloses a film thickness measuring device that is embedded in a platen 16. However, Wiswesser also only emits light onto a limited area of the wafer W. Thus, the film thickness is also only measured on a small area of the wafer W.

With the present invention, a sum of the radial lengths of the light source and the spectroscopy of the film thickness measuring device is larger than the radius of the workpiece. Accordingly, the film thickness measuring device can scan the entire surface of the workpiece according to rotation of the top ring and the polishing table. More specifically, because the film thickness measuring device is embedded in the rotatable polishing table, the entire surface of the workpiece can be scanned with the polishing table making only one revolution. Such an arrangement and such capability is neither taught nor suggested by either Yamane or Wiswesser or any permissible combination thereof.

In view of the above, it is respectfully submitted that all of claims 1-3, 5 and 16 and 17 clearly patentably distinguish over Yamane and Wiswesser. Indication of such is respectfully requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicants' undersigned representative.

Respectfully submitted,

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